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ABSTRACT

The Special Studies Series of analytical reports, prepared by demographers in the Population Division, Bureau of the Census, present analyses of statistics and suggest possible implications for public policy. Part of this series, the present report uses data from the June 1982 Current Population Survey and updates a June 1977 Census Bureau study on the child care arangements used by working mothers. Analysis focuses on the current arrangements used by 18- to 44-year-old working mothers of preschool-age children, methods of payment for child care services, and ways the availability of child care arrangements influence the mother's labor-force behavior. Additionally, characteristics of husbands who care for their young children while their wives are at work are profiled. Estimates of the number of women who use multiple child care arrangements and the effects that costs and availability of child care services have on women's attitudes towards employment are also covered in this report. Related materials are appended, including the June 1977 and June 1982 supplemental questionnaires. (RH)

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Special Studies

Series P-23 No. 129

Child Care Arrangements of Working Mothers: June 1982

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CURRENT POPULATION REPORTS

Special Studies
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Child Care Arrangements of Working Mothers: June 1982

by
Martin O'Connell and
Carolyn C. Rogers

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Preface

This monograph is part of the Special Studies Series (P-23) of analytical reports prepared by demographers in the Population Division, Bureau of the Census. These reports present a broad analysis of topical issues to increase the understanding of the statistics and their possible implications for public policy. The usual scope of these studies is broader than that of annual Census Bureau reports on population trends and characteristics.

This study shows the current child care arrangements used by working women in June 1982, discusses changes that have occurred since June 1977, and profiles the characteristics of husbands who care for their young children while their wives are at work. Estimates of the number of women who use multiple child care arrangements and the effects that costs and availability of child care services have on women's attitudes towards employment are new topics covered in this report.

These data were collected, in part, with funds provided by the National Institute of Child Health and Human Development, Department of Health and Human Services.

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Child Care Arrangements of Working Mothers: June 1982

INTRODUCTION

Increasing numbers of women with pre-school-age children have entered the labor force during the last several years. In June 1982, 6 million women 18 to 44 years old with a child under 5 years old were in the civilian labor force. This represents an addition of 1.3 million women with young children to the labor force since June 1977. How the young children of working women are cared for while their mothers are at work is not only an important issue for the social development of children, but is a paramount concern of parents, employers, and policy makers whose responsibilities include the welfare of children.[1]

This report uses data from the June 1982 Current Population Survey (CPS) and updates a previous Census Bureau study on the child care arrangements used by working mothers, which was based on data collected in the June 1977 CPS.[2] The ensuing analysis focuses on the current child care arrangements used by working women 18 to 44 years old with pre-school-age children, the methods of payment for child care services, and the ways that the availability of child care arrangements influence the mother's labor force behavior.

The principal findings of this analysis include the following:

- In June 1982, 15 percent of employed mothers used group care services as a principal child care arrangement for their youngest child under 5 years old, an increase from 13 percent in June 1977.

- Employed mothers who were more likely to use group care services included Black women, women whose youngest child was at least 3 years old, well-educated women, and women working full time.

- Child care provided by either the mother or father was used by 23 percent of employed mothers in June 1982: 14 percent of the families used the father as the principal caretaker, while in another 9 percent the mother cared for the child herself while she was working.

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[1] Urie Bronfenbrenner, "Who Cares for America's Children?" Testimony before a Joint House-Senate Hearing on the Child and Family Services Act of 1975, Dirkser Senate Office Building, June 19, 1975.

[2] Marjorie Lueck Ann C. Orr, and Martin O'Connell, *Trends In Child Care Arrangements of Working Mothers*, Current Population Reports, Series P-23, No. 117.

- Among husbands who were the principal caretakers of the child while their wives worked, 71 percent were employed, 24 percent were unemployed, and the remaining 5 percent were not in the labor force.

- Seventeen percent of the care for the youngest pre-school-age child of employed mothers in June 1982 was provided by the child's grandparent, while another 12 percent was provided by other relatives of the child. Among unmarried mothers, 40 percent of the care was provided by either the child's grandparent or another relative.

- Approximately 17 percent of all employed mothers used more than one type of child care arrangement for the youngest child under 5 years old. When the principal type of care was provided by the father in the child's home, 28 percent of the women used multiple care arrangements.

- Seventy-three percent of employed mothers made a cash-only payment for child care services; 94 percent of those using group care as the primary type of care made a cash-only payment.

- Among mothers of young children and who were not in the labor force in June 1982, 36 percent with family incomes under $15,000 responded that they would look for work if child care were available at a reasonable cost, compared with 13 percent of those with incomes of $25,000 or more.

WORKING WOMEN AND CHILD CARE: 1977 AND 1982

Not only are there more working women today with pre-school-age children than there were 5 years ago,[3] but the labor force participation rate for women with very young children has also increased since 1977. The labor force participation rate for women 18 to 44 years old with children under 5 increased from 41 percent in June 1977 to 48 percent in June 1982 (figure 1). Mothers with children under 1 year old increased their participation rate from 32 to 41 percent, while there is some evidence that women whose youngest child was 4 years old increased their rate from 50 to 54 percent.

A previous study documented the shift away from in-home child care arrangements to care outside the home or to group care centers between 1958 and 1977, a period during which women rapidly increased their labor force participation.[4] Data presented in table A, however, show that little change has occurred since 1977 in the distribution of the principal child care arrangements used by working women. The only significant change noted between 1977 and 1982 was a slight increase in the utilization of group care services[5] from 13 to 15 percent. This

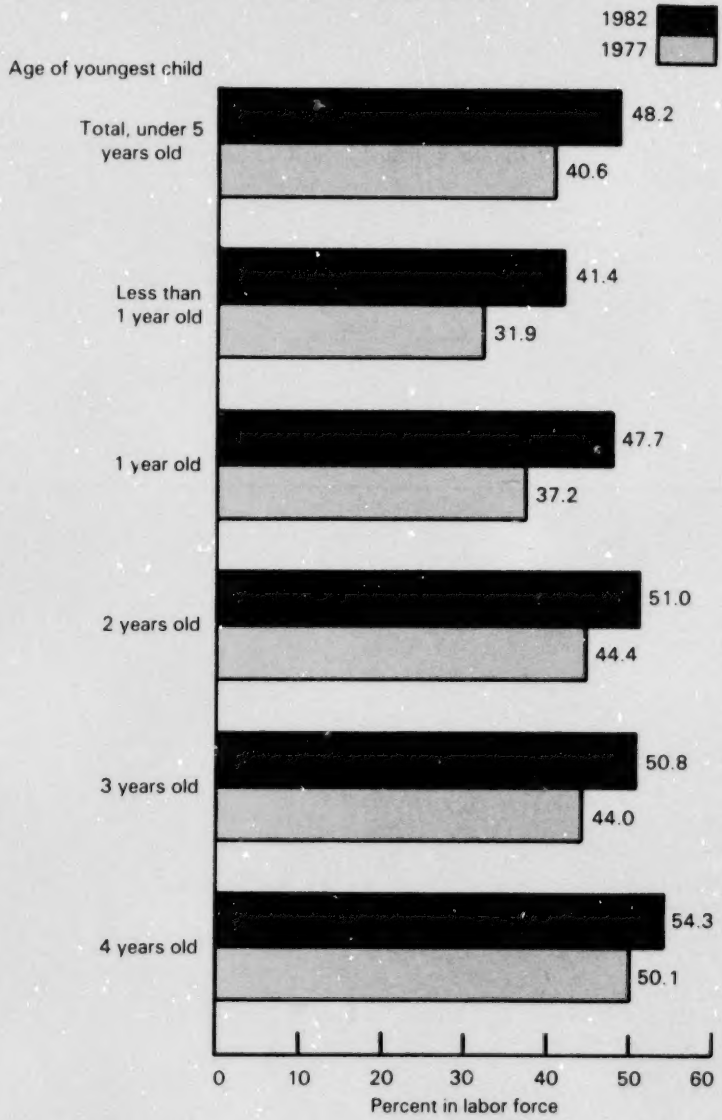
[3] Throughout this report, the phrases "pre-school-age children" and "children under 5 years old" will be used interchangeably. Children under a woman's care include not only her own natural children but also her adopted children, stepchildren, and other children who are part of the household and under her care. Foster children are excluded from the analysis.

[4] Lueck, Orr, and O'Connell, op. cit., p. 3.

[5] For the purposes of this report, the term "group care center" includes all types of child care, day care, and group care centers in addition to nursery schools, preschools, and kindergartens. Group care, then, is used in its broadest sociological interpretation, and is not used to denote a specific administrative or educational program.

FIGURE 1.

Percentage of Mothers 18 to 44 Years Old in the Labor Force, by Age of Youngest Child Under 5 Years Old: June 1977 and June 1982



Source: Table 1.

increase was due solely to the increased use of these services by women employed full time—no significant change occurred during this period for women employed on a part-time basis.

In June 1982, as in 1977, group care centers were used more frequently by unmarried mothers (20 percent) than by married mothers (13 percent) as a principal type of child care arrangement for the woman's youngest child under 5 years old. This greater reliance on group care services by unmarried women is, in part, the result of the loss of the father's potential services as a caretaker for

Table A. Percent Distribution of Principal Type of Child Care Arrangements Used by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Marital and Employment Status: June 1977 and June 1982

(Numbers in thousands. Data restricted to employed women having at least one child under 5 years old)

Marital status of mother and principal child care arrangement	June 1982			June 1977		
	Total employed	Employed full time	Employed part time	Total employed	Employed full time	Employed part time
ALL MARITAL STATUSES						
Number of mothers	5,086	3,263	1,824	3,987	2,645	1,342
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Care in child's home	30.6	25.7	39.3	31.9	27.6	40.3
By father	13.9	10.3	20.3	13.5	9.4	21.5
By other relative	11.2	10.3	12.7	12.1	12.3	11.7
By nonrelative	5.5	5.1	6.3	6.3	5.9	7.1
Care in another home	40.2	43.8	34.0	40.4	46.1	29.4
By relative	18.2	19.7	15.6	18.0	20.3	13.6
By nonrelative	22.0	24.1	18.4	22.4	25.8	15.8
Group care center	14.8	18.8	7.5	12.5	14.3	8.9
Mother cares for child while working	9.1	6.2	14.4	10.7	7.3	17.3
Other arrangements[1]	0.2	0.3	0.1	1.0	1.2	0.7
Don't know/no answer	5.1	5.3	4.7	3.4	3.4	3.3
MARRIED, HUSBAND PRESENT						
Number of mothers	4,093	2,524	1,569	3,268	2,070	1,197
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Care in child's home	30.4	25.5	38.0	32.4	27.3	41.0
By father	16.8	12.8	23.1	16.4	11.9	24.1
By other relative	8.8	8.5	9.3	9.6	9.4	9.8
By nonrelative	4.8	4.2	5.6	6.4	6.0	7.1
Care in another home	40.7	45.0	34.0	39.9	46.6	28.6
By relative	18.0	19.5	15.7	17.5	20.2	13.0
By nonrelative	22.7	25.5	18.3	22.4	26.4	15.6
Group care center	13.4	17.3	7.2	11.3	13.2	7.9
Mother cares for child while working	10.5	7.1	16.1	12.1	8.2	18.7
Other arrangements[1]	0.1	0.2	0.1	0.9	1.1	0.5
Don't know/no answer	4.9	5.0	4.6	3.4	3.4	3.2

Table A. Percent Distribution of Principal Type of Child Care Arrangements Used by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Marital and Employment Status: June 1977 and June 1982 —Continued

(Numbers in thousands. Data restricted to employed women having at least one child under 5 years old)

Marital status of mother and principal child care arrangement	June 1982			June 1977		
	Total employed	Employed full time	Employed part time	Total employed	Employed full time	Employed part time
ALL OTHER MARITAL STATUSES[2]						
Number of mothers	993	738	255	719	574	145
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Care in child's home	31.6	26.2	47.5	30.1	29.0	34.1
By father	1.9	1.5	3.0	0.5	0.6	–
By other relative	21.0	16.6	33.8	23.8	22.8	27.5
By nonrelative	8.7	8.1	10.7	5.8	5.6	6.6
Care in another home	38.2	39.6	33.8	42.7	44.3	36.5
By relative	19.0	20.5	14.6	20.3	20.7	18.8
By nonrelative	19.2	19.1	19.2	22.4	23.6	17.7
Group care center	20.2	23.8	9.7	18.1	18.2	17.5
Mother cares for child while working	3.3	3.2	3.9	4.3	4.0	5.7
Other arrangements[1]	0.5	0.6	–	1.6	1.4	2.4
Don't know/no answer	6.1	6.5	5.2	3.3	3.2	3.8

– Rounds to zero.

[1] Includes child taking care of self.

[2] Includes married, husband absent (including separated), widowed, divorced, and never-married women.

Source: June 1977 and June 1982 Current Population Survey.

the child. As shown in table A, 17 percent of married women used the father as the principal child care provider compared with 2 percent for unmarried women.

PARENTAL CHILD CARE ARRANGEMENTS

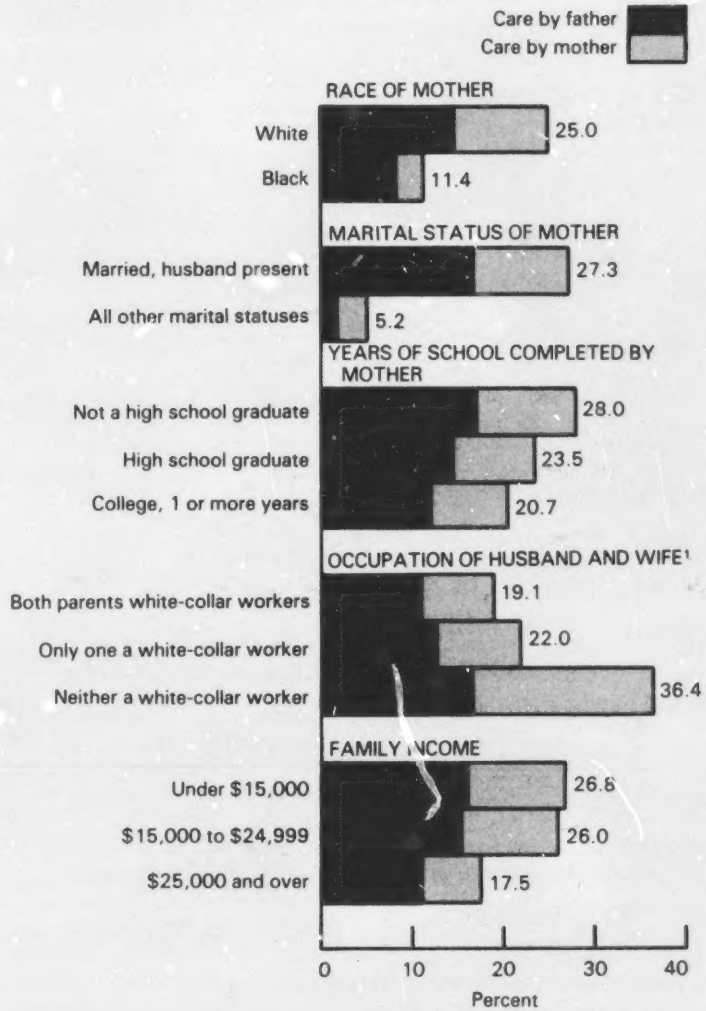
Twenty-three percent of employed mothers in June 1982 were able to provide parental child care for their youngest child under 5 years old while they were at work. The principal caretaker in 14 percent of the instances was the child's father, while in 9 percent the mother herself cared for the child while she was working (table 2, part A).

Data in figure 2 indicate that parental child care was reported more frequently by White women than by Black women. White women reported significantly higher percentages of paternal and maternal child care (15 and 10 percent, respectively) than did Black women (8 and 3 percent, respectively). The difference in the frequency of use of the father for child care services between White women

FIGURE 2.

Percentage of Employed Mothers Providing Parental Child Care for Their Youngest Child Under 5 Years Old: June 1982

(Data limited to principal child care arrangement)



[1]Limited to married couples where both the husband and wife are employed in the civilian labor force.

Source: Table 2; part A.

and Black women was due to the large percentage of Black working women with pre-school-age children who were unmarried in June 1982, 47 percent as compared with only 15 percent for White working women. This resulted in fewer opportunities for child care services to be provided by the father for Black women. Among currently married women, however, no significant differences were found in the use of the father as the principal child care provider between White women and Black women (table B). Child care provided by the mother while at work was still more prevalent among White women than Black women, for each marital status.

Table B. Percentage of Employed Mothers Providing Parental Child Care for Their Youngest Child Under 5 Years Old, by Marital Status of the Mother

(Data limited to principal child care arrangement)

Race and marital status	Number of mothers (thousands)	Parental child care		
		Total	Father	Mother
White:				
Total	4,203	25.0	14.7	10.3
Married, husband present	3,564	28.2	16.9	11.3
All other marital statuses	639	7.0	2.3	4.7
Black:				
Total	717	11.4	8.3	3.1
Married, husband present	382	19.1	14.8	5.1
All other marital statuses	335	1.7	0.8	0.9

Source: June 1982 Current Population Survey.

Figure 2 shows that 28 percent of employed mothers who were not high school graduates used parental child care, compared with 21 percent of employed mothers with at least 1 year of college. In addition, 27 percent of women living in families with annual incomes under $15,000 used parental child care arrangements, compared with 18 percent of women in families with incomes of $25,000 or more. While this difference by income partly reflects the financial restrictions lower income families face and the difficulties encountered in paying for more expensive nonparental child care services, it may also result from the reduction in family income brought about by the father acting as the principal caretaker of the child and not working at a paid job.

Table C profiles the labor force status of the husbands who care for the children while their wives work. The data imply that among husbands who were the principal caretakers of their children, very few viewed their principal activity as being full-time caretakers. Seventy-one percent were employed, but a large percentage (24 percent) were unemployed and looking for work. Of the remaining 5 percent who were not in the labor force, only 1 percent responded that their main activity during the survey week was keeping house.

The fact that such a large percentage of fathers were actively looking for work implies that paternal child care services, although important, can at best be con-

Table C. Percent Distribution of Labor Force Status of Husbands Who Are the Child Care Providers for the Youngest Child Under 5 Years Old

(Numbers in thousands. Data limited to wives in married-couple families whose husbands are not in the Armed Forces)

Labor force status of husband	Husband is principal caretaker			
	All employed wives	Wives employed full time	Wives employed part time	Husband is secondary caretaker
Number	650	312	338	98
Percent	100.0	100.0	100.0	100.0
In labor force	94.7	90.9	98.4	99.3
Employed	70.7	56.8	83.7	95.6
Unemployed	24.0	34.1	14.7	3.7
Not in labor force	5.3	9.1	1.6	0.7

Source: June 1982 Current Population Survey.

sidered only as a transitory type of arrangement. It may be that if these unemployed husbands do find work, sufficient income may be gained to enable the mothers either to leave the labor force or to arrange for cash payment for child care. This may arise if the woman initially entered the paid work force only because her husband became unemployed. Among women working full time, 34 percent of the husbands who were principal caretakers were unemployed, compared with 15 percent for women who worked only part time.

Among husbands who were secondary caretakers of their children, implying less time spent daily as a caretaker, only 4 percent were unemployed. A secondary caretaker situation, for example, can be a father who comes home from his job and looks after his child if the principal child care provider, such as a day care center, closes its doors in mid-afternoon.

Parental child care opportunities are limited by the time constraints of the parents' work schedules. In instances where both the husband and wife were employed in white-collar occupations, the principal care was provided by either parent in 19 percent of the families, compared with 36 percent where neither the husband nor wife was a white-collar worker (figure 2). The relatively extensive use of parental care by dual-working families where neither partner is a white-collar worker may result from increased opportunities for shift work or nighttime work.[6] These work schedules may more easily permit families to share child care responsibilities than do the work schedules of couples who are in white-collar occupations in which working hours are more likely to coincide.

Not only is paternal child care more frequently used by mothers who are in blue-collar/service occupations than in white-collar occupations, but so is child care provided by the mother herself (table 2, part A). Data in table D show that 14 percent of the employed women in blue-collar/service occupations in June

[6] Harriet B. Presser and Virginia S. Cain, "Shift Work Among Dual-Earner Couples with Children," *Science*, Vol. 219 (Feb. 18, 1983), p. 876-879.

Table D. Percentage of Employed Mothers Caring for the Youngest Child Under 5 Years Old While Working

(Numbers in thousands. Data limited to principal child care arrangement)

Occupation of mother	Number of mothers	Percentage of care at workplace		
		Total	Outside the home	In the home
Total[1]	5,086	9.1	3.1	6.0
Professional-managerial	1,201	5.0	2.2	2.7
Clerical-sales	2,036	6.0	2.4	3.6
Blue-collar/service workers	1,759	13.8	3.4	10.5

[1] Total includes wives employed as farm workers.

Source: June 1982 Current Population Survey.

1982 looked after their youngest pre-school-age child while working. (This percentage excludes child care provided at the work site by someone other than the mother.) Most of the women who are able to care for their child worked at home (11 percent) rather than away from home (3 percent). This suggests that women who are not white-collar workers—whose jobs may involve at-home work or where the family operates their own business and lives on the premises—may have more opportunity to work and care for their children at the same time than white-collar workers in an office environment away from their homes.

CHILD CARE BY RELATIVES

Relatives (excluding husbands) play a supportive role as child care providers for working women; 17 percent of the care provided for the youngest pre-school-age child of employed women in June 1982 was by the child's grandparent, while 12 percent was provided by another relative of the child (table 2, part A). This child care network is especially important for unmarried women with young children. While parental child care amounted to only 5 percent of all arrangements used by unmarried mothers, other relative care accounted for 40 percent of the principal child care arrangements used by these women. Use of relatives by married women was reported by 27 percent of the women in the survey (16 percent were grandparents and 11 percent were other relatives).

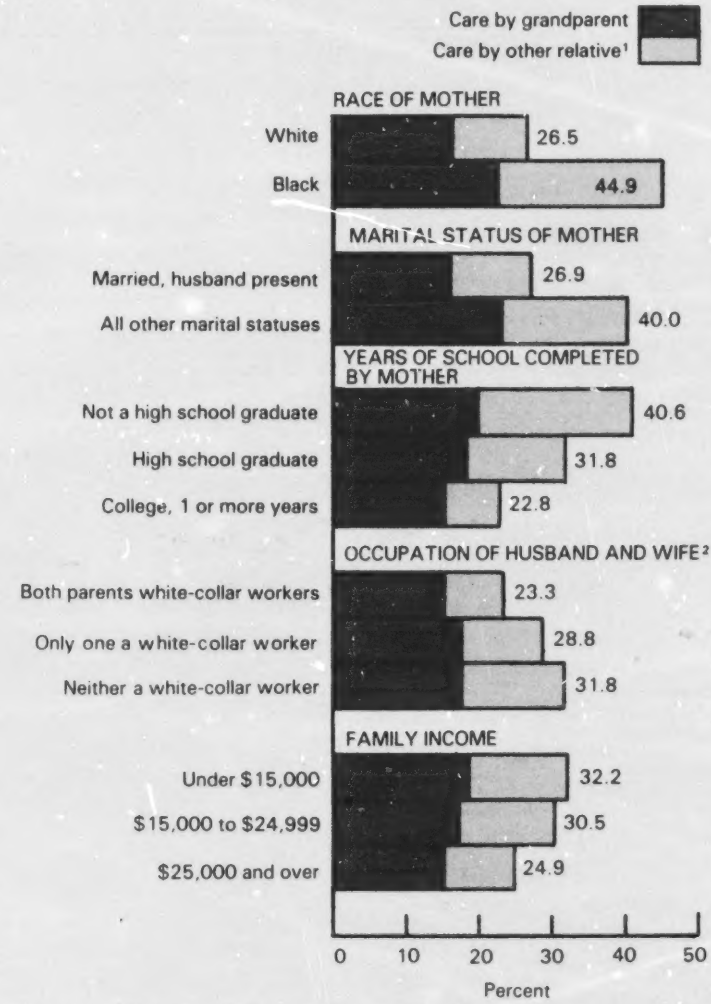
Data in figure 3 show that relatives are used as the principal child care provider more frequently among Black women than White women; by women with less than a high school education more than by those with 1 or more years of college; by families where neither parent is a white-collar worker more than where both are white-collar workers; and by families whose annual income is under $15,000 more than by those whose annual income is at least $25,000.

The number and proximity of relatives to the mother are important determinants of the use of relatives as child care providers. While urban dwellers are often pictured as having a more limited kinship network than do those living

FIGURE 3.

Percentage of Employed Mothers Using Relatives to Care for Their Youngest Child Under 5 Years Old: June 1982

(Data limited to principal child care arrangement)



[1]Excludes care provided by the child's parents.

[2]Limited to married couples where both the husband and wife are employed in the civilian labor force.

Source: Table 2, part A.

outside cities, the data indicate that no significant differences arise in the use of relatives as child care providers by the residential characteristics of the mother. Relatives were used as the principal caretakers by 30 percent of the women living in central cities, by 28 percent living in suburban areas, and by 31 percent living in nonmetropolitan areas. For all three residential categories, child care provided by the grandparents exceeded child care provided by all other relatives (excluding mothers and fathers) combined (table 2, part A).

GROUP CARE SERVICES

For 15 percent of working women with their youngest child under 5 years old in 1982, group care services were the principal child care arrangements used. Increases in the labor force participation of mothers with young children have been accompanied by a shift away from in-home child care to care outside the home or in group care centers. Part of the shift away from in-home care arrangements is due to the reduced number of potential in-home caretakers; increased separation and divorce has resulted in more one-parent families and the trend toward smaller family size has resulted in fewer older siblings in the home available for child care services. In addition, there seems to be an increasing public awareness of the need for child care services.

Table 2 shows that the most likely users of group care services are well-educated women, those working full time, and those who have high family incomes. Among employed women who had completed 1 or more years of college, 18 percent utilized some type of group care service. This compares with 14 percent among high school graduates and 9 percent among women who had not completed high school. Women in families with an income of $25,000 and above were more apt to use group care (17 percent) than were women with incomes under $15,000 (12 percent). Nearly 20 percent of employed women in professional-managerial occupations used group care as a principal type of arrangement for the youngest child under 5 years old, while only 9 percent of women in blue-collar/service occupations used group care services (figure 4).

Several other demographic factors are related to the use of group care arrangements. Black women were more likely to use group care (21 percent) than were White women (14 percent), and married women with their husbands present were less likely to use group care (13 percent) than were women of other marital statuses (20 percent). These differences indicate that the type of family a woman is in plays an important part in determining choice of child care service. A wide variation in proportions using group care also is noted by the age of the youngest child. Nearly 26 percent of employed women whose youngest child was 3 or 4 years old used group care services, compared with only 12 percent for those with their youngest child aged 1 or 2 years and 5 percent for women whose youngest child was under 1 year old.[7]

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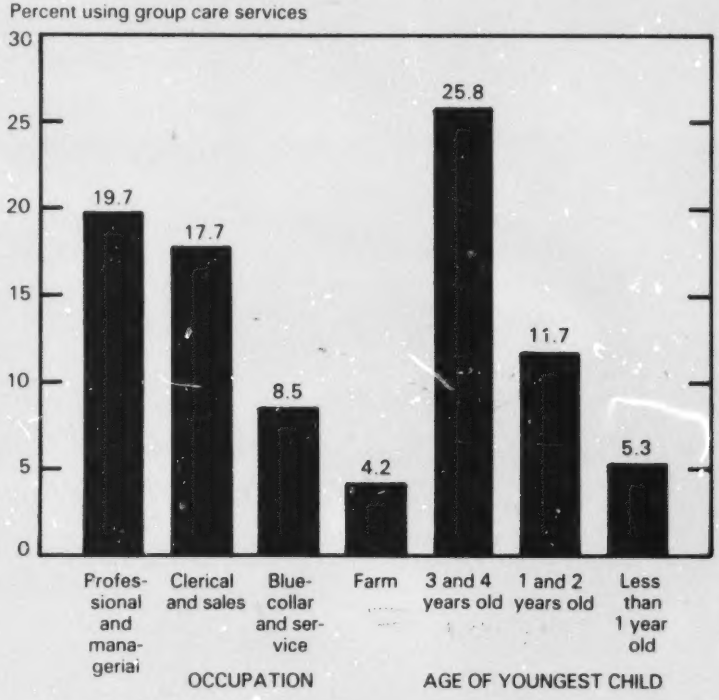
[7] When multiple classification analysis was used to standardize the socioeconomic factors related to the use of group care services, the same relationships as discussed in this section were found to persist.

FIGURE 4.

Percentage of Employed Mothers 18 to 44 Years Old Using Group Care Services as the Principal Type of Child Care Arrangement for Their Youngest Child Under 5 Years Old: June 1982



Source: Table 2, part A.

In addition to factors related to a woman's socioeconomic status and family composition, residence also enters into the type of child care arrangement selected. Nineteen percent of employed women who resided in central cities used group care services, compared with 11 percent of women living in nonmetropolitan areas. This suggests that differences in women's employment patterns and population density may make this type of child care more feasible and/or available in some areas than in others.

Women employed full time are more likely to use group care (19 percent) than are their counterparts who work part time (8 percent). This less frequent use of group care services among part-time employed women may result from the greater flexibility in the work schedule of part-time workers, thus increasing the

feasibility of using other types of child care arrangements (e.g. in-home care by the father).

The predominant type of group care arrangement used by working women in June 1982 was the day care center, accounting for 9 percent of all child care arrangements, compared with 6 percent accounted for by nursery schools (table 2). Table E indicates that the vast majority of the centers were located somewhere other than the woman's workplace. Farm workers, whose use of day care centers constituted only 4 percent of their child care arrangements, used day care centers at the worksite (the farm) in the same proportion as elsewhere (about 2 percent).

Table E. Percentage of Employed Mothers Using Day Care Services as the Principal Arrangement for the Youngest Child Under 5 Years Old

(Numbers in thousands. Data limited to principal child care arrangement)

Occupation of mother	Number of mothers	Percentage using day care centers		
		Total	Center at workplace	Center elsewhere
Total	5,086	9.2	0.7	8.4
Professional-managerial	1,201	12.0	1.3	10.7
Clerical-sales	2,036	10.9	0.6	10.3
Blue-collar/service workers	1,759	5.5	0.4	5.1
Farm workers	91	4.2	2.1	2.1

Source: June 1982 Current Population Survey.

MULTIPLE CHILD CARE ARRANGEMENTS

Approximately 860,000 employed mothers 18 to 44 years old in 1982 (17 percent) used more than one type of child care arrangement for the youngest child under 5 years old (table 3). A higher proportion of White women utilized multiple child care arrangements than did either Black women or Hispanic women. Differences in the percentage of women who use more than one type of child care arrangement are discussed below.

Nearly 19 percent of women employed part time used more than one type of child care, compared with 16 percent of those employed full time. Perhaps their more erratic working hours and scheduling (e.g., temporary workers) forces part-time workers to use more alternative arrangements to care for their children (e.g., a part-time worker may arrange for a nonrelative to care for her child when she works during the day and for her husband to care for their child if she then works in the evening). Women are more likely to use multiple types of child care when the youngest child is 3 or 4 years old than when the child is under 1 year old. This may be partially due to a greater degree of selectivity on the part of the mother to consistently use the same caretaker for very young children compared with relatively older children.

One of the most interesting relationships shown in table 3 is between the type of principal child care arrangement and the use of multiple types of care. The highest use of multiple child care arrangements (28 percent) occurs when the principal type of care is provided in the child's home by the father. This is not a surprising finding, because alternative types of care would need to be considered when the father is at work and not available to care continuously for the child. Twenty percent of women used multiple care when the principal type of care provided is by a group care center. This reflects the more restricted hours of day care centers and nursery schools and thus the need to arrange for other caretakers when such centers close for the day.

Table 4 indicates the type of secondary care selected according to the type of principal care used. The most frequently mentioned secondary arrangement used is care in another home by a relative (25 percent), followed by care in the home of a nonrelative (18 percent). These types of care are probably the most convenient in terms of flexible time schedules and proximity to one's own home. Use of other relatives (including brothers and sisters) in the child's home accounted for only 11 percent of all secondary child care arrangements.

When the father (in the child's home) was the principal caretaker, 53 percent of those who used a secondary arrangement provided care for their child in another home: 23 percent by a relative and 30 percent by a nonrelative, although the percentages are not statistically different. Table 4 shows that when group care is the principal type of care provided, 51 percent of the women who used a secondary arrangement also used care in another home, with 38 percent of the care in a relative's home. The necessity for multiple arrangements suggests that child care services, in order to meet the growing demand, ideally should be highly visible, convenient to the user, and flexible in scheduling.

CASH PAYMENT FOR CHILD CARE

Various types of child care services are sometimes paid for in cash, while at other times some kind of noncash arrangement is made. Occasionally no payment of any kind is required. Noncash arrangements may involve providing transportation or meals for the caretaker or exchanging child care services with neighbors and relatives. Among all employed women, 73 percent made a cash payment only for the care of their youngest child under 5 years; nearly 10 percent made noncash payments only and 13 percent made no payment of any kind. The type of payment arranged is strongly related to the type of child care used. Among those who used group care as the principal child care arrangement, 94 percent made cash-only payments; 75 percent of those using care in another home made cash-only payments, while those who used care in the child's home made cash-only payments less frequently (49 percent). Within the latter two categories, a higher percentage of cash payments were made when care was provided by a nonrelative than by a relative of the child.

Both where child care is provided as well as who provides child care influences whether a cash, a noncash, or no payment is arranged. For example, when a

grandparent provided the care in the child's home, 25 percent of the women arranged a noncash payment while 45 percent made no payment at all. Even when the grandparent cared for the child in another home, a high proportion of women made a noncash arrangement or no payment at all. Cash payments, in general, are more likely to be made when the principal type of care is provided in group care centers, or when a nonrelative is the principal caretaker.

The relation between the type of payment and the woman's employment status is shown in table 5. A higher percentage of full-time workers made cash-only payments for child care (77 percent) than did part-time workers (64 percent). For both full- and part-time employed mothers, a higher proportion made cash-only payments when care was provided by a group care center than when care was provided in the child's home or in another home.

ATTITUDES TOWARD EMPLOYMENT AND CHILD CARE

For employed women who have young children, the time constraints of combining both roles implies that some sort of trade-off occurs between working and caring for the children. In an attempt to assess the nature of such a trade-off, the June 1982 CPS asked employed women if they would work more hours per week if additional satisfactory child care were available at a reasonable cost; only 13 percent answered affirmatively (table F). Among part-time workers, nearly 21 percent said that they would work more hours, while only 9 percent of full-time workers said yes. It appears that some women have selected part-time employment because of difficulties in arranging for child care. Additionally, women whose youngest child was at least 1 year old were more apt to say that they would work more hours than were those with a child under 1 year old.

Table F. Percentage of Employed Mothers Who Would Work More Hours per Week if Additional Satisfactory Child Care Were Available at a Reasonable Cost

(Numbers in thousands. Data limited to women with a child under 5 years old)

Characteristic of employed mother	Number of mothers	Would you work more hours?				
		Total	Yes	No	Don't know	No answer
Total employed	5,086	100.0	13.1	80.7	2.7	3.5
Employment status:						
Full time	3,263	100.0	9.0	85.2	2.1	3.8
Part time	1,824	100.0	20.6	72.6	3.7	3.1
Age of youngest child:						
Less than 1 year old	1,116	100.0	10.0	80.5	2.8	6.7
1 and 2 years old	2,284	100.0	14.4	80.1	3.2	2.2
3 and 4 years old	1,644	100.0	13.5	82.9	1.9	1.7

Source: June 1982 Current Population Survey.

Another attitudinal question was asked of women who were not currently employed in June 1982.[8] These women were asked if they had to turn down a job offer in the last 4 weeks because of difficulties in arranging for child care for children under 5 years old. Only 4 percent of unemployed women answered yes to the question (table G); no difference was found by age of the youngest child. It seems that for those women who were not currently working in June 1982, child care constraints did not result in missed job opportunities.

Table G. Percentage of Mothers Who Have Had to Refuse a Job Offer in the Last 4 Weeks Because of Difficulties in Arranging for Child Care for Any Children Under 5 Years Old

(Numbers in thousands. Data limited to women not currently employed)

Characteristic of mother	Number of mothers	Have you had to turn down a job offer?				
		Total	Yes	No	Don't know	No answer
Total	7,400	100.0	2.9	94.9	0.2	2.0
Employment status:						
Unemployed	920	100.0	4.2	94.3	–	1.5
Not in labor force	6,480	100.0	2.7	94.9	0.2	2.1
Age of youngest child:						
Less than 1 year old	2,201	100.0	2.9	94.4	0.2	2.5
1 and 2 years old	3,128	100.0	3.1	95.3	0.1	1.5
3 and 4 years old	2,004	100.0	2.6	94.8	0.3	2.3

– Rounds to zero.

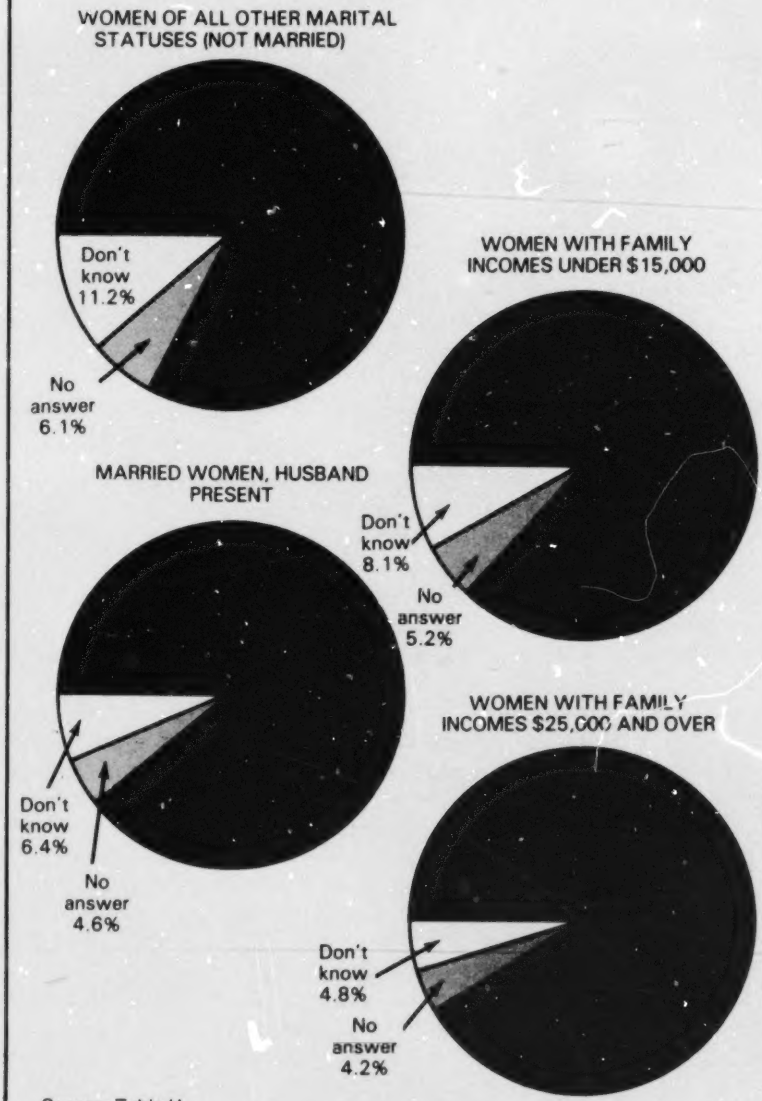
Source: June 1982 Current Population Survey.

Table H shows the responses of women who were not in the labor force to the question on whether they would look for work if child care were available at a reasonable cost: 26 percent of the women said yes, 62 percent said no, and 7 percent were undecided. About 45 percent of women who were not currently married replied in the affirmative, whereas only 22 percent of the married women, with husbands present, did so (figure 5). Family income level also influences a woman's response to the question on whether she would look for work if child care were available at a reasonable cost (table H). Women in families at the lower end of the income scale were more apt to say that they would look for work (36 percent). Only 13 percent of women in families with incomes of $25,000 and above said that they would look for work if child care arrangements were available at a reasonable cost. Unmarried women and those who suffer more financial hardships apparently viewed the availability of child care services as an important factor in making the decision whether or not to look for employment.

[8] Not currently employed includes those unemployed and those not in the labor force.

FIGURE 5.

Percentage of Mothers Not in the Labor Force Who Would Look for Work if Child Care Were Available at a Reasonable Cost: June 1982


WOMEN OF ALL OTHER MARITAL STATUSES (NOT MARRIED)
Don't know 11.2%
No answer 6.1%
WOMEN WITH FAMILY INCOMES UNDER $15,000
Don't know 8.1%
No answer 5.2%
MARRIED WOMEN, HUSBAND PRESENT
Don't know 6.4%
No answer 4.6%
WOMEN WITH FAMILY INCOMES $25,000 AND OVER
Don't know 4.8%
No answer 4.2%

Source: Table H.

Table H. Percentage of Mothers Not in the Labor Force Who Would Look for Work if Child Care Were Available at a Reasonable Cost

(Numbers in thousands. Data limited to women with a child under 5 years old)

Characteristic of mother	Number of mothers	Would you look for work at this time?				
		Total	Yes	No	Don't know	No answer
Total	6,480	100.0	25.9	62.0	7.2	4.9
Marital status:						
Married, husband present	5,326	100.0	21.8	67.2	6.4	4.6
All other marital statuses	1,154	100.0	44.8	38.0	11.2	6.1
Age of youngest child:						
Less than 1 year old	1,947	100.0	26.3	62.7	6.2	4.9
1 and 2 years old	2,744	100.0	27.1	61.7	7.4	3.7
3 and 4 years old	1,734	100.0	23.7	61.9	8.0	6.4
Family income:						
Under $15,000	2,769	100.0	36.4	50.3	8.1	5.2
$15,000 to $24,999	1,849	100.0	21.6	66.4	7.8	4.2
$25,000 and over	1,610	100.0	13.1	77.9	4.8	4.2

Source: June 1982 Current Population Survey.

Table I presents the results of multiple classification analysis (MCA) on whether a woman would seek work if child care were available at a reasonable cost. MCA is a method of multiple standardization in which the composition of the population with respect to selected variables is statistically controlled while assessing the effect of a particular variable on the attitudinal question. The second column of data shows the percentages of women in different categories who would look for work while the data in the third column show the percentages after standardization.

Standardization significantly lowered the percentage of both Black women and women in the "other marital statuses" category who responded that they would look for work if child care were available at a reasonable cost. While these women were still more likely to answer "yes" than were their counterparts, factors other than race and marital status alone undoubtedly entered into their decisions. Standardization increased the percentages of women who had completed 1 or more years of college and those in families with incomes of $25,000 and over. However, these two groups of women still recorded lower affirmative responses to looking for a job than did women who were not high school graduates and who lived in families whose income was less than $15,000.

It is apparent from these data that the availability of child care facilities plays an influential role in a mother's decision whether or not to enter the labor force. Given that about one-fourth of the women not in the labor force who have preschool age children would want to work (about 1.7 million), policies and programs, both private and governmental, can be very instrumental in affecting the labor force participation of women, especially at the local labor market level.

Table I. Multiple Classification Analysis of Mothers Not in the Labor Force Who Would Look for Work if Child Care Were Available at a Reasonable Cost

(Numbers in thousands)

Characteristic of mother	Number of mothers[1]	Percent who would look for work	
		Unadjusted percent	Adjusted percent
Total	5,709	27.2	(X)
Marital status:			
Married, husband present	4,729	22.9	25.7
All other marital statuses	980	38.1	34.7
Age of youngest child:			
Less than 1 year old	1,724	27.4	27.1
1 and 2 years old	2,460	27.9	28.1
3 and 4 years old	1,524	25.9	26.1
Years of school completed:			
Not a high school graduate	1,466	37.9	31.4
High school graduate	2,714	27.9	28.1
College, 1 or more years	1,529	15.7	21.5
Family income:			
Under $15,000	2,503	38.5	33.4
$15,000 to $24,999	1,714	22.5	25.3
$25,000 and over	1,493	13.7	19.2
Race:			
White	5,020	23.4	24.8
Black	689	55.2	45.2

X Not applicable.

[1] Data refer to the weighted number of mothers. Numbers of women and percents (unadjusted) may differ from those shown in table H because of different universe restrictions. Women of races other than White or Black and women with no report on age of youngest child and family income are omitted from this analysis.

Source: June 1982 Current Population Survey.

Table 1. Labor Force Status of Women 18 to 44 Years Old With Youngest Child Under 5 Years Old, by Age of the Child: June 1977 and June 1982

(Numbers in thousands)

Year and labor force status	Total[1]	Age of youngest child				
		Less than 1 year old	1 year old	2 years old	3 years old	4 years old
1982						
Number	12,486	3,317	2,823	2,589	1,962	1,686
Percent	100.0	100.0	100.0	100.0	100.0	100.0
In labor force	48.2	41.4	47.7	51.0	50.[illegible]	54.3
Employed	40.8	33.7	40.4	44.1	43.1	47.3
Unemployed	7.4	7.7	7.3	6.9	7.7	7.0
Not in labor force	51.8	58.6	52.3	49.0	49.2	45.7
1977						
Number	11,593	2,903	2,412	2,128	1,914	1,779
Percent	100.0	100.0	100.0	100.0	100.0	100.0
In labor force	40.6	31.9	37.2	44.4	44.0	50.1
Employed	35.0	24.0	31.0	39.7	39.2	45.7
Unemployed	5.6	7.0	6.2	4.7	4.8	4.4
Not in labor force	59.4	68.1	62.8	55.6	56.0	49.9

[1] includes all women with a child under 5 years old but with no report on exact age.

Source: June 1982 Current Population Survey and Current Population Reports, Series P-23, No. 117, table A-2.

Table 2. Percent Distribution of Principal Type of Child Care Arrangement Used by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Selected Characteristics

Part A. All Employed Mothers

(Data restricted to employed women having at least one child under 5 years old. For meaning of symbols, see appendix A)

Characteristic	Number of mothers (thousands)	Type of principal child care arrangement used by mother											
			Care in child's home				Care in another home			Group care			
		Total	By father	By grandparent	By other relative	By nonrelative	By grandparent	By other relative	By nonrelative	Nursery school	Day care center	Mother cares for child	Other arrangements[1]	Don't know/ no answer
Total	5,086	100.0	13.9	5.9	5.2	5.5	11.3	6.9	22.0	5.6	9.2	9.1	0.2	5.1
Age of youngest child:														
Less than 1 year old	1,116	100.0	13.9	8.9	5.1	6.4	13.5	6.2	23.0	1.7	3.6	9.2	—	8.6
1 and 2 years old	2,284	100.0	15.8	6.3	5.0	6.2	10.5	7.3	25.2	3.2	8.5	8.6	0.2	3.3
3 and 4 years old	1,644	100.0	11.0	3.6	5.7	4.3	11.0	7.1	17.3	11.7	14.1	9.9	0.4	3.9
Race and Spanish origin:														
White	4,203	100.0	14.7	5.2	4.5	6.4	10.8	6.0	23.6	4.8	8.7	10.3	0.1	4.9
Black	717	100.0	8.3	7.3	9.2	1.9	15.1	13.3	13.8	8.7	12.2	3.1	0.6	6.5
Spanish origin[2]	351	100.0	15.2	9.6	11.5	3.6	11.4	13.3	18.1	4.3	4.9	2.7	—	5.4
Marital status:														
Married, husband present	4,093	100.0	16.8	4.4	4.4	4.8	11.5	6.6	22.7	4.8	8.6	10.5	0.1	4.9
All other marital statuses[3]	993	100.0	1.9	12.3	8.7	8.7	10.6	8.4	19.2	8.6	11.7	3.3	0.5	6.1
Years of school completed:														
Not a high school graduate	651	100.0	17.0	7.0	10.2	4.0	12.8	10.6	15.2	3.0	5.7	11.0	—	3.6
High school graduate	2,421	100.0	14.5	6.2	5.2	4.9	12.0	8.4	20.8	5.4	8.2	9.0	0.2	5.1
College, 1 year or more	2,014	100.0	12.0	5.3	3.6	6.8	9.9	4.0	25.7	6.7	11.4	8.7	0.3	5.6

Occupation of mother:														
Professional and managerial workers . . .	1,201	100.0	10.6	5.5	3.7	7.8	8.8	4.7	28.1	7.7	12.0	5.0	0.4	5.8
Clerical and sales workers	2,036	100.0	13.5	6.2	5.2	4.6	12.4	6.6	22.5	6.8	10.9	6.0	0.1	5.0
Blue collar and service workers	1,759	100.0	17.2	6.0	6.2	5.1	11.6	8.7	17.8	3.0	5.5	13.8	0.2	4.7
Farm workers	91	100.0	–	4.0	6.5	4.4	11.7	8.9	13.4	–	4.2	42.3	–	4.7
Occupation of husband and wife[4]:														
Both white-collar workers	1,245	100.0	10.9	6.3	3.0	6.6	8.9	5.1	27.9	7.3	10.6	8.2	–	5.2
Only one a white-collar worker	1,448	100.0	12.7	3.7	4.6	4.7	14.0	6.5	22.7	5.5	10.8	9.3	0.4	4.9
Neither white-collar workers	841	100.0	16.7	2.6	5.3	2.9	14.9	9.0	18.8	1.2	3.9	19.7	–	5.0
Family income:														
Under $15,000	1,666	100.0	16.0	5.0	4.9	5.9	13.6	8.7	17.2	4.6	7.8	10.8	0.5	4.9
$15,000 to $24,999 . . .	1,533	100.0	15.3	5.4	6.9	3.8	11.8	6.4	20.1	5.2	9.7	10.7	–	4.9
$25,000 and over	1,752	100.0	11.1	6.5	4.0	6.8	8.7	5.7	28.7	6.8	10.4	6.4	0.1	4.9
Residence:														
In central cities	1,307	100.0	15.4	6.6	6.5	6.0	10.0	6.5	18.1	6.9	11.6	6.5	0.4	5.5
Suburban areas	2,022	100.0	13.4	5.9	4.8	5.9	10.7	6.5	23.0	6.8	8.7	8.2	0.2	5.8
Nonmetropolitan areas . .	1,757	100.0	13.2	5.5	4.7	4.8	13.0	7.7	23.8	3.2	7.9	12.1	0.1	4.0

[1] Includes child taking care of self.
[2] Persons of Spanish origin may be of any race.
[3] Includes married, husband absent (including separated), widowed, divorced, and never-married women.
[4] Limited to married couples where both the husband and wife are employed in the civilian labor force.

Table 2. Percent Distribution of Principal Type of Child Care Arrangement Used by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Selected Characteristics—Continued

Part B. Mothers Employed Full Time

(Data restricted to employed women having at least one child under 5 years old. For meaning of symbols, see appendix A)

Characteristic	Number of mothers (thousands)	Type of principal child care arrangement used by mother												
			Care in child's home				Care in another home			Group care				
		Total	By father	By grandparent	By other relative	By nonrelative	By grandparent	By other relative	By nonrelative	Nursery school	Day care center	Mother cares for child	Other arrangements[1]	Don't know/no answer
Total	3,263	100.0	10.3	5.4	4.9	5.1	11.8	7.9	24.1	7.2	11.6	6.2	0.3	5.3
Age of youngest child:														
Less than 1 year old	714	100.0	8.9	8.9	4.9	6.3	14.4	6.4	28.0	1.5	4.8	6.3	—	9.5
1 and 2 years old	1,419	100.0	12.5	5.5	5.0	5.6	11.0	8.6	27.2	4.0	11.0	5.7	0.2	3.8
3 and 4 years old	1,104	100.0	8.3	3.2	4.7	3.8	11.3	8.1	17.7	15.2	16.8	6.9	0.6	3.3
Race and Spanish origin:														
White	2,557	100.0	10.5	4.8	3.9	6.2	11.2	6.9	26.1	6.5	11.2	7.2	0.2	5.0
Black	581	100.0	7.8	5.5	8.5	1.2	15.9	13.1	15.2	9.5	13.3	2.9	0.8	6.5
Spanish origin[2]	244	100.0	15.2	7.4	13.7	3.2	10.1	11.3	22.8	4.9	5.8	2.2	—	3.3
Marital status:														
Married, husband present	2,524	100.0	12.8	4.2	4.2	4.2	11.8	7.7	25.5	6.2	11.1	7.1	0.2	5.0
All other marital statuses[3]	738	100.0	1.5	9.6	7.0	8.1	12.0	8.5	19.1	10.6	13.2	3.2	0.6	6.5
Years of school completed:														
Not a high school graduate	414	100.0	16.3	5.8	11.1	3.9	12.0	11.0	17.6	3.1	6.6	9.0	—	3.6
High school graduate	1,600	100.0	10.5	5.1	4.7	4.6	13.2	10.1	23.1	7.1	10.2	6.4	0.2	4.8
College, 1 year or more	1,249	100.0	8.0	5.8	3.0	6.1	10.0	4.0	27.4	8.7	15.0	5.0	0.5	6.5

Occupation of mother:														
Professional and managerial workers	800	100.0	7.7	5.2	2.9	6.8	8.7	5.4	28.3	9.1	14.1	3.8	0.6	7.3
Clerical and sales workers	1,351	100.0	9.2	5.4	4.8	4.1	13.4	7.0	25.8	8.8	14.7	2.3	0.1	4.5
Blue collar and service workers	1,063	100.0	14.0	5.7	6.3	4.9	12.4	10.9	19.1	4.1	6.2	11.3	0.3	4.7
Farm workers	49	100.0	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)
Occupation of husband and wife[4]:														
Both white-collar workers	742	100.0	6.3	6.1	2.5	5.5	9.6	5.5	30.6	9.1	13.8	4.7	–	6.2
Only one a white-collar worker	926	100.0	7.5	3.7	4.2	4.4	14.4	7.1	26.3	6.8	15.0	5.6	0.5	4.4
Neither white-collar workers	465	100.0	13.0	1.8	5.3	2.7	15.9	12.8	21.7	2.2	3.5	16.4	–	4.8
Family income:														
Under $15,000	1,046	100.0	13.9	3.9	4.2	6.2	14.9	9.3	17.6	6.4	9.0	8.4	0.7	5.6
$15,000 to $24,999	942	100.0	10.0	4.9	6.7	3.2	13.2	7.4	22.7	6.6	14.2	6.9	–	4.4
$25,000 and over	1,188	100.0	7.7	6.6	3.8	5.7	8.3	6.7	31.2	8.3	12.3	4.0	0.2	5.2
Residence:														
In central cities	929	100.0	12.0	6.4	6.9	4.6	10.8	6.9	19.0	8.2	14.5	4.5	0.5	5.6
Suburban areas	1,231	100.0	8.1	4.9	4.4	5.2	11.5	7.0	27.2	9.1	10.9	5.2	0.4	6.1
Nonmetropolitan areas	1,102	100.0	11.1	5.2	3.7	5.5	13.2	9.7	24.8	4.2	9.9	8.7	–	4.2

[1] Includes child taking care of self.
[2] Persons of Spanish origin may be of any race.
[3] Includes married, husband absent (including separated), widowed, divorced, and never-married women.
[4] Limited to married couples where both the husband and wife are employed in the civilian labor force.

Table 2. Percent Distribution of Principal Type of Child Care Arrangement Used by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Selected Characteristics—Continued

Part C. Mothers Employed Part Time

(Data restricted to employed women having at least one child under 5 years old. For meaning of symbols, see appendix A)

Characteristic	Number of mothers (thousands)	Type of principal child care arrangement used by mother												
			Care in child's home				Care in another home			Group care		Mother cares for child	Other arrangements[1]	Don't know/ no answer
		Total	By father	By grandparent	By other relative	By nonrelative	By grandparent	By other relative	By nonrelative	Nursery school	Day care center			
Total	1,824	100.0	20.3	6.8	5.9	6.3	10.4	5.3	18.4	2.7	4.9	14.4	0.1	4.7
Age of youngest child:														
Less than 1 year old	402	100.0	22.8	8.8	5.3	6.5	12.0	5.8	14.1	2.0	1.3	14.3	–	7.0
1 and 2 years old	865	100.0	21.1	7.6	5.0	7.0	9.7	5.3	22.0	1.8	4.4	13.5	0.2	2.4
3 and 4 years old	540	100.0	16.7	4.4	7.7	5.2	10.5	4.9	16.5	4.4	8.5	16.2	–	5.0
Race and Spanish origin:														
White	1,647	100.0	21.2	5.8	5.3	6.6	10.1	4.5	19.6	2.3	4.8	15.1	0.1	4.7
Black	137	100.0	10.4	14.8	12.2	5.0	11.9	14.3	7.9	5.1	7.6	4.2	–	6.6
Spanish origin[2]	107	100.0	15.2	14.6	6.5	4.7	14.2	17.8	7.5	3.1	2.8	3.7	–	10.0
Marital status:														
Married, husband present	1,569	100.0	23.1	4.7	4.6	5.6	11.0	4.8	18.3	2.7	4.5	16.1	0.1	4.6
All other marital statuses[3]	255	100.0	3.0	20.2	13.6	10.7	6.5	8.1	19.2	2.6	7.1	3.9	–	5.2
Years of school completed:														
Not a high school graduate	237	100.0	18.1	9.2	8.6	4.0	14.0	10.0	11.1	2.8	4.2	14.4	–	3.7
High school graduate	821	100.0	22.4	8.4	6.2	5.6	9.8	5.0	16.4	1.9	4.4	14.2	0.2	5.6
College, 1 year or more	765	100.0	18.7	4.5	4.6	7.8	9.8	4.0	22.9	3.4	5.7	14.6	–	4.1

Occupation of mother:														
Professional and managerial workers . . .	400	100.0	16.4	6.1	5.2	9.8	9.2	3.1	27.6	4.7	7.8	7.4	–	2.8
Clerical and sales workers	685	100.0	22.0	7.9	6.1	5.6	10.6	5.8	16.1	2.9	3.6	12.3	–	6.1
Blue collar and service workers	696	100.0	22.1	6.4	6.0	5.5	10.4	5.4	15.9	1.3	4.5	17.6	0.2	4.7
Farm workers	42	100.0	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)	(B)
Occupation of husband and wife[4]:														
Both white-collar workers	503	100.0	17.6	6.5	3.7	8.3	8.0	4.4	23.9	4.5	5.8	13.5	–	3.8
Only one a white-collar worker	522	100.0	21.8	3.7	5.4	5.3	13.4	5.5	16.5	3.3	3.3	15.9	0.3	5.8
Neither white-collar workers	376	100.0	21.2	3.6	5.3	3.3	13.6	4.3	15.4	–	4.3	23.8	–	5.2
Family income:														
Under $15,000	620	100.0	19.6	6.8	6.2	5.3	11.4	7.7	16.7	1.6	5.7	15.0	0.2	3.8
$15,000 to $24,999 . . .	591	100.0	23.9	6.2	7.2	4.6	9.6	4.7	15.9	3.0	2.6	16.7	–	5.7
$25,000 and over	564	100.0	18.3	6.3	4.4	9.3	9.4	3.5	23.3	3.7	6.2	11.4	–	4.4
Residence:														
In central cities	378	100.0	23.7	6.9	5.7	9.3	8.0	5.6	15.9	3.6	4.3	11.6	–	5.4
Suburban areas	791	100.0	21.6	7.4	5.5	7.1	9.5	5.7	16.6	3.1	5.4	12.8	–	5.2
Nonmetropolitan areas . .	654	100.0	16.8	6.1	6.3	3.7	12.6	4.4	22.2	1.5	4.7	17.9	0.2	3.6

[1] Includes child taking care of self.
[3] Persons of Spanish origin may be of any race.
[5] Includes married, husband absent (including separated), widowed, divorced and never-married women.
[4] Limited to married couples where both the husband and wife are employed in the civilian labor force.

Table 3. Percent of Employed Mothers 18 to 44 Years Old Using More Than One Type of Child Care Arrangement for the Youngest Child Under 5 Years Old

(Numbers in thousands. For meaning of symbols, see appendix A)

Characteristic	Number of mothers	Using more than one type of child care	
		Number	Percent
Total	5,086	860	16.9
Principal child care arrangement:			
Care in child's home	1,554	337	21.7
By father	705	200	28.4
By other relative	567	93	16.4
By nonrelative	282	44	15.7
Care in another home	2,048	313	15.3
By relative	927	124	13.4
By nonrelative	1,121	189	16.9
Group care center[1]	751	151	20.2
Mother cares for child while working	464	45	9.8
Other arrangements[2]	11	2	(B)
Employment status:			
Full time	3,263	516	15.8
Part time	1,824	344	18.9
Age of youngest child:			
Less than 1 year old	1,116	155	13.9
1 and 2 years old	2,284	384	16.8
3 and 4 years old	1,645	317	19.3
Race and Spanish origin:			
White	4,203	750	17.8
Black	717	94	13.1
Spanish origin[3]	351	45	12.7
Marital status:			
Married, husband present	4,093	691	16.9
All other marital statuses[4]	993	169	17.0

[1] Includes nursery schools and day care centers.
[2] Includes child taking care of self.
[3] Persons of Spanish origin may be of any race.
[4] Includes married, husband absent (including separated), widowed, divorced, and never-married women.
Source: June 1982 Current Population Survey.

Table 4. Percent Distribution of Type of Secondary Child Care Used by Employed Mothers 18 to 44 Years Old for the Youngest Child Under 5 Years Old, by Principal Child Care Arrangement

(Numbers in thousands. Data limited to women using more than one type of child care arrangement. For meaning of symbols, see appendix A)

Secondary child care arrangement	Principal child care arrangement						
		Care in child's home			Care in another home		
	All arrangements[1]	By father	By other relative	By nonrelative	By relative	By nonrelative	Group care center[2]
Number of mothers	860	200	93	44	124	189	151
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Care in child's home	37.8	36.1	31.3	(B)	32.7	39.3	42.3
By father	13.0	—	7.7	(B)	20.7	16.1	13.8
By other relative	11.3	16.5	4.9	(B)	2.2	14.9	12.9
By nonrelative	13.5	19.6	18.7	(B)	9.8	8.3	15.6
Care in another home	43.4	52.7	41.2	(B)	31.3	45.0	50.6
By relative	25.3	23.1	7.2	(B)	10.0	39.5	38.0
By nonrelative	18.1	29.6	34.0	(B)	21.3	5.5	12.6
Group care center[2]	13.2	7.3	24.3	(B)	25.8	11.9	3.6
Mother cares for child while working	2.0	2.9	1.2	(B)	1.4	1.6	1.1
Other arrangements[3]	0.3	—	—	(B)	1.9	0.1	0.2
Don't know/no answer	3.3	0.9	2.1	(B)	6.9	2.0	2.3

[1] Includes the small number of women who care for the child while working, report another arrangement, or give no answer to the principal type of child care arrangement used.
[2] Includes nursery schools and day care centers.
[3] Includes child taking care of self.

Source: June 1982 Current Population Survey.

Table 5. Percent Distribution of Mothers Making Cash or Noncash Arrangements for Child Care for the Youngest Child Under 5 Years Old

(Numbers in thousands. For meaning of symbols, see appendix A)

Employment status and principal and secondary type of arrangement	Number of mothers	Total	Cash payment only	Noncash arrangement only[1]	Both cash and noncash arrangements	No payment of any kind	Don't know/ no answer
PRINCIPAL ARRANGEMENT							
Total employed	3,550	100.0	73.3	9.5	3.7	12.8	0.7
Care in child's home	770	100.0	49.2	16.6	7.8	25.6	0.9
By grandparent	302	100.0	22.3	25.4	5.8	45.2	1.4
By nonfamily relative	186	100.0	42.0	21.8	11.6	23.2	1.4
By nonrelative	282	100.0	82.8	3.6	7.5	6.1	–
Care in another home	2,029	100.0	74.8	9.9	3.2	11.4	0.6
By grandparent	575	100.0	37.9	24.1	4.8	32.4	0.9
By nonfamily relative	333	100.0	72.5	10.5	7.3	9.3	0.4
By nonrelative	1,121	100.0	94.3	2.4	1.3	1.3	0.7
Group care center	750	100.0	94.0	1.5	0.7	3.3	0.8
Nursery school	283	100.0	93.6	1.6	1.2	2.3	1.3
Day care center	467	100.0	94.1	1.2	0.4	3.8	0.4
Employed full time	2,496	100.0	77.2	7.9	4.0	10.1	0.9
Care in child's home	465	100.0	49.0	16.1	10.1	23.9	0.9
By grandparent	177	100.0	25.9	28.2	7.2	36.4	2.4
By nonfamily relative	121	100.0	42.2	16.7	15.6	25.4	–
By nonrelative	167	100.0	78.9	2.8	9.2	9.1	–
Care in another home	1,418	100.0	78.5	8.2	3.4	9.0	0.9
By grandparent	386	100.0	43.8	20.9	5.4	28.5	1.3
By nonfamily relative	247	100.0	79.2	9.9	6.3	4.2	0.5
By nonrelative	785	100.0	95.3	1.3	1.5	0.9	0.9
Group care center	613	100.0	95.6	1.1	0.7	2.3	0.7
Nursery school	235	100.0	92.9	2.0	0.8	2.8	1.5
Day care center	378	100.0	97.1	0.4	0.5	2.0	–
Employed part time	1,053	100.0	64.0	13.4	3.1	19.1	0.4
Care in child's home	305	100.0	49.2	17.4	4.6	28.2	1.0
By grandparent	125	100.0	17.1	21.3	3.8	57.7	–
By nonfamily relative	65	100.0	(B)	(B)	(B)	(B)	(B)
By nonrelative	115	100.0	88.6	4.8	5.0	1.7	–
Care in another home	610	100.0	66.2	13.8	3.0	17.0	–
By grandparent	188	100.0	25.8	30.5	3.4	40.3	–
By nonfamily relative	86	100.0	53.3	12.2	10.3	24.2	–
By nonrelative	336	100.0	92.0	5.0	0.8	2.2	–
Group care center	137	100.0	87.6	2.9	1.5	8.0	1.5
Nursery school	48	100.0	(B)	(B)	(B)	(B)	(B)
Day care center	89	100.0	81.4	4.7	–	11.8	2.1

Table 5. Percent Distribution of Mothers Making Cash or Noncash Arrangements for Child Care for the Youngest Child Under 5 Years Old —Continued

(Numbers in thousands. For meaning of symbols, see appendix A)

Employment status and principal and secondary type of arrangement	Number of mothers	Total	Cash payment only	Noncash arrangement only[1]	Both cash and noncash arrangements	No payment of any kind	Don't know/ no answer
SECONDARY ARRANGEMENT							
Total employed	665	100.0	60.7	13.0	1.4	20.1	4.9
Care in child's home	183	100.0	64.5	13.1	1.1	13.1	8.2
By grandparent	33	100.0	(B)	(B)	(B)	(B)	(B)
By nonfamily relative	34	100.0	(B)	(B)	(B)	(B)	(B)
By nonrelative	116	100.0	81.8	2.9	1.6	6.9	6.8
Care in another home	368	100.0	50.0	16.8	2.2	29.1	2.7
By grandparent	151	100.0	16.2	24.0	3.0	54.6	2.2
By nonfamily relative	62	100.0	(B)	(B)	(B)	(B)	(B)
By nonrelative	155	100.0	83.6	8.7	1.3	4.6	1.8
Group care center	113	100.0	91.2	—	—	1.8	7.1
Nursery school	49	100.0	(B)	(B)	(B)	(B)	(B)
Day care center	64	100.0	(B)	(B)	(B)	(B)	(B)

[1] Noncash arrangements include lunches provided for sitters, an exchange of child care services, or other similar in-kind arrangements.

Note: Data presented exclude cases where the mother, father, brother or sister was the person responsible for the care of the child.

Source: June 1982 Current Population Survey.

Appendix A. Definitions and Explanations

Population coverage. The data shown in this report from the Current Population Survey (CPS) are for the civilian noninstitutional population of the United States. Because only a small proportion of women are inmates of institutions (less than 1 percent of women 15 to 44 years old being institutionalized), the data for the civilian noninstitutional population have a high degree of comparability with data for the total population.

Age. The age classification is based on the age of the person at his or her last birthday.

Race. The population is implicitly divided in this report into three groups on the basis of race: White, Black, and "other races." The last category includes Indians, Japanese, Chinese, and any other race except White and Black. The tables in this report show data for all races, Whites, and Blacks.

Spanish origin. Persons of Spanish origin in this report are those persons who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Spanish origin. The latter category includes persons from Spain as well as persons with combinations of types of Spanish origins. Persons who reported that they were of one of the specific Spanish origin categories and a non-Spanish category were included in the specific Spanish category. Persons of Spanish origin may be of any race.

Marital status. Data refer to marital status at the time of the survey. All women may be categorized as either single (never married) or ever married, the latter consisting of women who are married (including separated), widowed, or divorced. Among married women, two additional categories are also shown, "husband present" or "husband absent" (including separated), in order to show whether or not the husband is a member of the household.

Married-couple family. A married-couple family is a "family" maintained by a husband and wife. Tables displaying data by characteristics of "wives" refer to women living in this type of family.

Own child. The children cared for by a woman. This includes her own (natural) children, adopted children, or stepchildren who are living in the household.

Child care arrangements. Data on child care arrangements were obtained from mothers interviewed in the June 1977 and June 1982 supplements to the CPS. The respondent universe and questionnaire used in these two surveys are not strictly comparable with each other as indicated below:

June 1977. Questions on child care arrangements were asked of all currently married women 14 to 44 years old and all separated, divorced, widowed, and never-married women 18 to 44 years old who had any children less than 5 years old living in the household. Data on specific arrangements were only obtained for women who were employed as of the survey date and only for their two youngest children under 5 years of age. (See appendix C.) Data on child care arrangements relate to the usual provisions made for the child while the mother was at work. Data on child care arrangements relate to the woman at the time of the survey. Additional questions were also asked on cash payment for child care arrangements, and future work and fertility expectations.

"Group care centers" in this report includes nurseries or preschools or day care centers. Use of nursery schools or preschools may be underestimated in this survey because of closings in June. Also, since only the principal arrangement was tabulated, women who may have used group care centers for a minor portion of the work week were not included in the totals. For these reasons, use of the numbers shown in this report to estimate the *total* number of children in group care centers at *any time* can be extremely misleading.

June 1982. Questions on child care arrangements in the June 1982 supplement differed slightly with those in the June 1977 CPS. (See appendix D.) The survey universe was limited to all women 18 to 44 years old (regardless of marital status) who had any children less than 5 years old living in the household. Data in 1982, again, only referred to the arrangements used while the woman was at work. However, data in 1982 were obtained both for the principal arrangement and the secondary arrangement, if used. Data were only obtained for the woman's youngest child under 5 years old in the June 1982 CPS. Additional questions were also asked on the effect of child care arrangements on work plans and type of payment made for child care arrangements.

In labor force. Persons are classified in the labor force if they were employed as civilians, unemployed, or in the Armed Forces during the survey week (see child care arrangements section for exceptions to this definition). The "civilian labor force" includes all civilians classified as employed or unemployed.

Not in labor force. All civilians who are not classified as employed or unemployed are defined as "not in the labor force."

Employed. Employed persons comprise (1) all civilians who, during the specified week, did any work at all as paid employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family and (2) all

those who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, or labor-management dispute, or because they were taking time off for personal reasons, whether or not they were paid by their employers for time off, and whether or not they were seeking other jobs. Excluded from the employed group are persons whose only activity consisted of work around the house (such as own home housework and painting or repairing own home) or volunteer work for religious, charitable, and similar organizations.

Unemployed. Unemployed persons are those civilians who, during the survey week, had no employment but were available for work and (1) had engaged in any specific jobseeking activity *within the past 4 weeks*, such as registering at a public or private employment office, meeting with prospective employers, checking with friends or relatives, placing or answering advertisements, writing letters of application, or being on a union or professional register; (2) were waiting to be called back to a job from which they had been laid off; or (3) were waiting to report to a new wage or salary job within 30 days.

Full-time and part-time employment. Persons who worked 35 hours or more during the survey week and those who worked 1 to 34 hours but usually work full time are classified as employed full time. Part-time workers are persons who worked 1 to 34 hours during the survey week and usually work only 1 to 34 hours. Persons with a job but not at work during the survey week are classified according to whether they usually work full or part time.

Labor force participation rate. The labor force participation rate is the percent of the civilian noninstitutional population in the labor force.

Occupation. Data on occupation are shown for the employed and relate to the job held during the survey week. Persons employed at two or more jobs were reported in the job at which they worked the greatest number of hours during the week. The occupation groupings used here are the major groups used in the 1970 Census of Population. The composition of the groups is shown in 1970 Census of Population, Vol. 1, *Characteristics of the Population, Chapter C, General Social and Economic Characteristics, U.S. Summary.*

Some of the major occupation groups are sometimes combined as follows:

White collar. Professional, technical, and kindred workers; managers and administrators, except farm; sales workers; and clerical and kindred workers.

Blue collar. Craft and kindred workers; operatives, including transport equipment operatives; and laborers, except farm.

Service. Includes private household and service workers other than private household.

Farm. Farmers and farm laborers.

Family money income. Family money income represents the total money income of all members of the family. Family money income in this report is limited to

money income before payment of Federal, State, local, or Social Security taxes and before any other types of deductions such as union dues and Medicare premiums. Total money income is the sum of the amounts received from wages and salaries, self-employment income (including losses), Social Security, Supplemental Security income, public assistance, interest, dividends, rent, veterans' payments, unemployment and workers' compensations, and any other source of money income which was regularly received.

It should be noted that the income estimates cited in this report are based on money income alone and do not include the value of noncash benefits such as food stamps, subsidized school lunches and public housing, Medicaid, Medicare, employer contributions for pension and health plans, and other fringe benefits that are additional sources of noncash income for many individuals. These elements should be considered when comparing income levels.

Income data in this report are based on the respondent's estimate of total family money income in broad, fixed income levels. Previous research has shown that the use of broad income intervals to record money income tends to reduce the rate of nonreporting while increasing the likelihood that the amounts reported will be significantly understated as compared with results from more detailed questions.

In the June 1982 survey, family income was transcribed from information first obtained at the time a household entered the Current Population Survey and updated when it reentered the survey. For about one-fourth of the sample, the data are for the 12-month period ending in June 1982, and for the remaining fourths, the data are for 12-month periods ending in March, April, and May 1982.

Years of school completed. Data on years of school completed in this report were derived from the combination of answers to questions concerning the highest grade of school attended by the person and whether or not that grade was finished. The questions on educational attainment apply only to progress in "regular" schools. Such schools include graded public, private, and parochial elementary and high schools (both junior and senior high), colleges, universities, and professional schools, whether day schools or night schools.

Metropolitan-nonmetropolitan residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central county. In New England, SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1970 census and does not include any subsequent additions or changes.

Central cities. Each SMSA must include at least one central city, and the complete title of an SMSA identifies the central city or cities. If only one central

city is designated, then it must have 50,000 inhabitants or more. The area title may include, in addition to the largest city, up to two city names on the basis and in the order of the following criteria: (1) The additional city has at least 250,000 inhabitants or (2) the additional city has a population of one-third or more of that of the largest city and minimum population of 25,000. An exception occurs where two cities have contiguous boundaries and constitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

Suburbs. The remainder of the metropolitan area that is not in central cities is designated as outside central cities or "suburbs."

Symbols. A dash (–) represents zero or a number which rounds to zero; "B" means that the base is too small to show the derived measure; "NA" means not available; and "X" means not applicable.

Rounding of estimates. Individual numbers are rounded to the nearest thousand without being adjusted to group totals, which are independently rounded. Derived measures are based on unrounded numbers when possible; otherwise, they are based on the rounded numbers.

Appendix B. Source and Reliability of Estimates

SOURCE OF DATA

The estimates in this report are based on data collected in June 1977 and 1982 from the Current Population Survey (CPS) conducted by the Bureau of the Census.

The monthly CPS deals mainly with labor force data for the civilian noninstitutional population. Questions relating to labor force participation are asked about each member 14 years old and over in each sample household. In addition, supplementary questions are asked each June about fertility and birth expectations of American women. In June 1977 and 1982 additional questions were asked about child care arrangements.

The present CPS sample was initially selected from the 1970 census files and is continuously updated to reflect new construction. (See section, "Nonsampling Variability.") The current CPS sample is located in 629 areas comprising 1,148 counties, independent cities, and minor civil divisions in the Nation. In June 1982, approximately 60,000 occupied households were eligible for interview. Of this number about 2,000 occupied units were visited but interviews were not obtained because the occupants were not found at home after repeated calls or were unavailable for some other reason.

The following table provides a description of some aspects of the CPS sample designs in use during the referenced data collection periods.

Description of the Current Population Survey for the June Supplement

Time period	Number of sample areas[1]	Households eligible	
		Interviewed	Not interviewed
June 1977	461	45,000	2,000
June 1982	629	58,000	2,000

[1] These areas were chosen to provide coverage in each State and the District of Columbia.

The estimation procedure used for the monthly CPS data involved the inflation of weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. These independent estimates are based on statistics from decennial censuses; statistics on births, deaths, immigration, and emigration; and statistics on the strength of the Armed

Forces. The estimation procedure used for June 1982 data utilized independent estimates based on the 1980 decennial census.

RELIABILITY OF ESTIMATES

Since the estimates were based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaires, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling. The standard errors provided for this report primarily indicate the magnitude of the sampling errors. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The full extent of the nonsampling error is unknown. Consequently, particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

Nonsampling variability. Nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all units with the sample (undercoverage).

Undercoverage in the CPS results from missed housing units and missed persons within sample households. Overall undercoverage, as compared to the level of the 1980 decennial census, is about 7 percent. It is known that CPS undercoverage varies with age, sex, and race. Generally, undercoverage is larger for males than for females and larger for Blacks and other races than for Whites. Ratio estimation to independent age-sex-race population controls, as described previously, partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have different characteristics than interviewed persons in the same age-sex-race group. Further, the independent population controls used have not been adjusted for undercoverage in the 1980 census.

Sampling variability. The standard errors given in the following tables are primarily measures of sampling variability, that is, of the variation that occurred by chance because a sample rather than the entire population was surveyed. The sample estimate and its standard error enable one to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these surveyed under essentially the same general conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.

2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

Standard errors may also be used to perform hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The most common types of hypotheses appearing in this report are 1) the population parameters are identical or 2) they are different. An example of this would be comparing the percentages for 1982 to 1977 of employed mothers whose principal type of child care arrangement was in the child's home. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the parameters are different when, in fact, they are identical. All statements of comparison in the text have passed an hypothesis test at the 0.10 level of significance or better, and most have passed an hypothesis test at the 0.05 level of significance or better. This means that, for most differences cited in the text, the estimated difference between parameters is greater than twice the standard error of the difference. For the other differences mentioned, the estimated difference between parameters is between 1.6 and 2.0 times the standard error of the difference. When this is the case, the statement of comparison is qualified in some way, e.g., by the use of the phrase "some evidence."

Comparability of data. Caution should be used when comparing estimates for 1982, which reflect 1980 census-based population controls, to those for 1977, which reflect 1970 census-based population controls. This change in population controls had relatively little impact on summary measures such as means, medians, and percent distributions, but did have a significant impact on levels. For example, use of 1980 based population controls resulted in about a 2-percent increase in the civilian noninstitutional population and in the number of families and households. Thus, estimates of levels for 1982 will differ from 1977 by more than what could be attributed to actual changes in the population and these differences could be disproportionately greater for certain population subgroups than for the total population.

Note when using small estimates. Summary measures such as percent distributions are shown only when the base is 75,000 or greater. Because of the large

standard errors involved, there is little chance that summary measures would reveal useful information when computed on a smaller base. Estimated numbers are shown, however, even though the relative standard errors of these numbers are larger than those for corresponding percentages. These smaller estimates are provided primarily to permit such combinations of the categories as serve each user's needs.

STANDARD ERROR TABLES AND THEIR USE

In order to derive standard errors that would be applicable to a large number of estimates and could be prepared at a moderate cost, a number of approximations were required. Therefore, instead of providing an individual standard error for each estimate, generalized sets of standard errors are provided for various types of characteristics. As a result, the sets of standard errors provided give an indication of the order of magnitude of the standard error of an estimate rather than the precise standard error.

The figures presented in tables B-1 and B-2 are approximations to standard errors of various estimates shown in this report. Estimated standard errors for specific characteristics cannot be obtained from tables B-1 and B-2 without the use of the factors in table B-3. These factors must be applied to the generalized standard errors in order to adjust for the combined effect of sample design and estimating procedure on the value of the characteristic. Standard errors for intermediate values not shown in the generalized tables of standard errors may be approximated by interpolation.

Table B-1. Standard Errors of Estimated Numbers

(Numbers in thousands)

Size of estimate	Total or White and Black	Spanish origin
20	6	7
30	7	8
50	9	11
100	13	15
250	21	24
500	29	34
1,000	41	(X)
2,500	65	(X)
5,000	90	(X)
10,000	124	(X)
25,000	177	(X)

X Not applicable.

Two parameters are used (denoted "a" and "b") to calculate standard errors for each type of characteristic; they are presented in table B-4. These parameters were used to calculate the standard errors in tables B-1 and B-2 and to calculate the factors in table B-3. They also may be used to directly calculate the standard

errors for estimated numbers and percentages. Direct computation of the standard errors will give more accurate results than the use of the standard error tables. Methods for direct computation are given in the following sections.

Table B-2. Standard Errors of Estimated Percentages

Base of estimated percentage (thousands)	Estimated percentage						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
20	2.9	4.1	6.4	8.8	10.5	12.7	14.7
30	2.4	3.4	5.2	7.2	8.6	10.4	12.0
50	1.8	2.6	4.0	5.6	6.6	8.0	9.3
100	1.3	1.8	2.9	3.9	4.7	5.7	6.6
250	0.8	1.2	1.8	2.5	3.0	3.6	4.2
500	0.6	0.8	1.3	1.8	2.1	2.5	2.9
1,000	0.4	0.6	0.9	1.2	1.5	1.8	2.1
2,500	0.3	0.4	0.6	0.8	0.9	1.1	1.3
5,000	0.2	0.3	0.4	0.6	0.7	0.8	0.9
10,000	0.13	0.2	0.3	0.4	0.5	0.6	0.7
25,000	0.08	0.12	0.2	0.2	0.3	0.4	0.4

Standard errors of estimated numbers. The approximate standard error, σ_x, of an estimated number shown in this report can be obtained in two ways. It may be obtained by use of the formula

$$\sigma_x = f\,\sigma \qquad (1)$$

where f is the appropriate factor from table B-3, and σ is the standard error of the estimate obtained by interpolation from table B-1. Alternatively, standard errors may be approximated by formula (2), from which the standard errors were calculated in table B-1.

$$\sigma_x = \sqrt{ax^2 + bx} \qquad (2)$$

Here x is the size of the estimate and a and b are the parameters in table B-4 associated with the particular characteristic. Use of this formula will provide more accurate results than the use of formula (1) above.

Illustration of the computation of the standard error of an estimated number. Table A of this report shows that there were 5,086,000 employed mothers 18 to 44 years old with children under 5 years old in June 1982. Using formula (2) and the parameters a= −0.000019 and b = 1725 from table B-4, the estimate of the standard error is

$$\sigma_x = \sqrt{(-0.000019)\,(5{,}086{,}000)^2 + (1725)\,(5{,}086{,}000)} \doteq 91{,}000^1$$

[1] Using formula (1), the appropriate factor (1.0) from table B-3, and interpolation from table B-1, the approximate standard error is 1.0 x 91,000 = 91,000.

This means that the chances are 68 out of 100 that the estimate would have been a figure differing from the average of all possible samples by less than 91,000. Similarly, the chances are 95 out of 100 that the estimate would have been a figure differing from the average of all possible samples by less than 182,000 (twice the standard error), i.e., the 95-percent confidence interval for the number of employed mothers 18-44 years old with children under 5 years old in June 1982 is from 4,904,000 to 5,268,000.

Table B-3. Factors to be Applied to Tables B-1 and B-2 to Estimate Standard Errors

Characteristic	Factor
Employment or labor force status of mother:	
Total or White	1.0
Black	1.0
Spanish origin	1.2
Unemployment	1.1
Principal child care arrangement, use of more than one child care arrangement:	
Total or White	1.0
Black	1.0
Spanish origin	1.2
Marital status by parental child care:	
Total or White	1.4
Black	1.7
Cash and noncash payment of principal child care arrangement	1.1
Labor force status of husband	1.1
Occupation of husband and wife	1.2
Family income	1.0
Years of school completed by mother	1.1

Note: For data cross-tabulated by metropolitan-nonmetropolitan areas, multiply the above factors of interest by a factor of 1.0 or 1.22, respectively, to obtain the appropriate standard error.

Standard errors of estimated percentages. The reliability of an estimated percentage, computed using sample data for both numerator and denominator, depends on both the size of the percentage and the size of the total upon which this percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. When the numerator and denominator of the percentage are in different categories, use the factor or parameters indicated by the numerator. The approximate standard error, $\sigma_{(x,p)}$, of an estimated percentage can be obtained by use of the formula

$$\sigma_{(x,p)} = f\,\sigma \qquad (3)$$

In this formula f is the appropriate factor from table B-3 and σ is the standard error of the estimate from table B-2. Alternatively, the standard errors may be approximated by formula (4), from which the standard errors in tables B-2 were calculated.

$$\sigma_{(x,p)} = \sqrt{\frac{b}{x}(p)(100-p)} \qquad (4)$$

Here x is the size of the subclass of persons or families and unrelated individuals which is the base of the percentage, p is the percentage ($o<p<100$), and b is the parameter in table B-4 associated with the particular characteristic in the numerator of the percentage. Use of this formula will provide more accurate results than the use of formula (3) above.

Illustration of the computation of the standard error of an estimated percentage. Table A of this report shows that of the 5,086,000 employed mothers 18 to 44 years old with children under 5 years old, 30.6 percent arranged their principal type of child care in the child's home. From table B-4 the appropriate b parameter is 1725. Using formula (4), the approximate standard error of 30.6 percent is

$$\sigma_{(x,p)} = \sqrt{\frac{1725}{5{,}086{,}000}(30.6)(100-30.6)} \doteq 0.8 \text{ percent}^2$$

This means that the 68 percent confidence interval for the percentage of employed mothers 18 to 44 years with children under 5 years old with principal type of child care arrangement occurring in the child's home is from 29.8 to 31.4 percent; the 95 percent confidence interval is from 29.0 to 32.2 percent, i.e. $30.6 \pm (2 \times 0.8)$.

Standard error of a difference. For a difference between two sample estimates, the standard error is approximately equal to

$$\sigma_{(x-y)} = \sqrt{\sigma_x^2 + \sigma_y^2} \qquad (5)$$

where σ_x and σ_y are the standard errors of the estimates x and y (from tables B-1 and B-2). The estimates can be numbers, percents, ratios, etc. This will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error.

Illustration of the computation of the standard error of a difference. Table A shows that in 1977 there were 3,987,000 employed mothers 18-44 years old with children under 5 years old. Of these 3,987,000, 31.9 percent arranged their princi-

[2] Using formula (3), the appropriate factor from table B-3 (1.0), and table B-2, the approximate standard error is 1.0 x 0.8 = 0.8 percent.

Table B-4. "a" and "b" Standard Error Parameters for Calculating Approximate Standard Errors

Characteristic	Parameters	
	a	b
Employment or labor force status of mother:		
Total or White	−0.000019	1725
Black	−0.000164	1725
Spanish origin	−0.000030	2328
Unemployment	−0.000015	2206
Principal child care arrangement, use of more than one child care arrangement:		
Total or White	−0.000019	1725
Black	−0.000164	1725
Spanish origin	−0.000030	2328
Marital status by parental child care:		
Total or White	−0.000017	3500
Black	−0.000210	5020
Cash and noncash payment of principal child care arrangement	−0.000009	1885
Labor force status of husband	−0.000025	2013
Occupation of husband and wife	−0.000016	2327
Family income	−0.000010	1721
Years of school completed by mother	−0.000025	2014

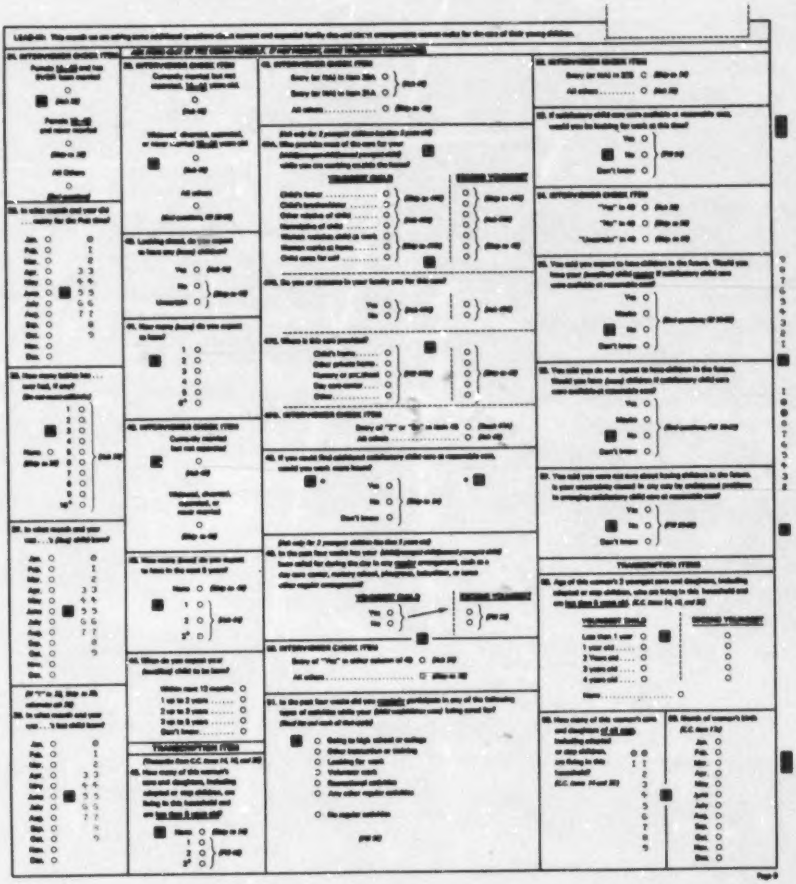
Note: For data cross-tabulated by metropolitan-nonmetropolitan areas, multiply the above parameters of interest by a factor of 1.0 or 1.5, respectively, to obtain the appropriate standard error parameters.

pal type of child care in the child's home. The apparent difference between the 1977 and 1982 percentage of principal type of child care arrangements occurring in the child's home is 1.3 percent. Using formula (2) and the appropriate parameter from table B-4, the approximate standard error, σ_y, of 31.9 percent is 1.0 percent. As shown above, the standard error, σ_x, of 30.6 percent is 0.8 percent. Therefore, from formula (6) the approximate standard error of the estimated difference of 1.3 percent is

$$\sigma_{(x-y)} = \sqrt{(0.8)^2 + (1.0)^2} \doteq 1.3$$

This means that the 68 percent confidence interval for the true difference between the 1977 and 1982 percentage of principal type of child care arrangements occurring in the child's home is 0 to 2.6 percent. The 95-percent confidence interval on the difference is −1.3 to 3.9. Therefore, a conclusion that the average estimate of the difference derived from all possible samples lies within a range computed in this way would be correct for roughly 95 percent of all possible samples. Since this interval contains zero, we cannot conclude that there has been a statistically significant change between 1977 and 1982 in the principal type of child care arrangement occurring in the child's home for employed mothers 18 to 44 years old with children under 5 years old.

Appendix C. June 1977 Supplemental Questionnaire



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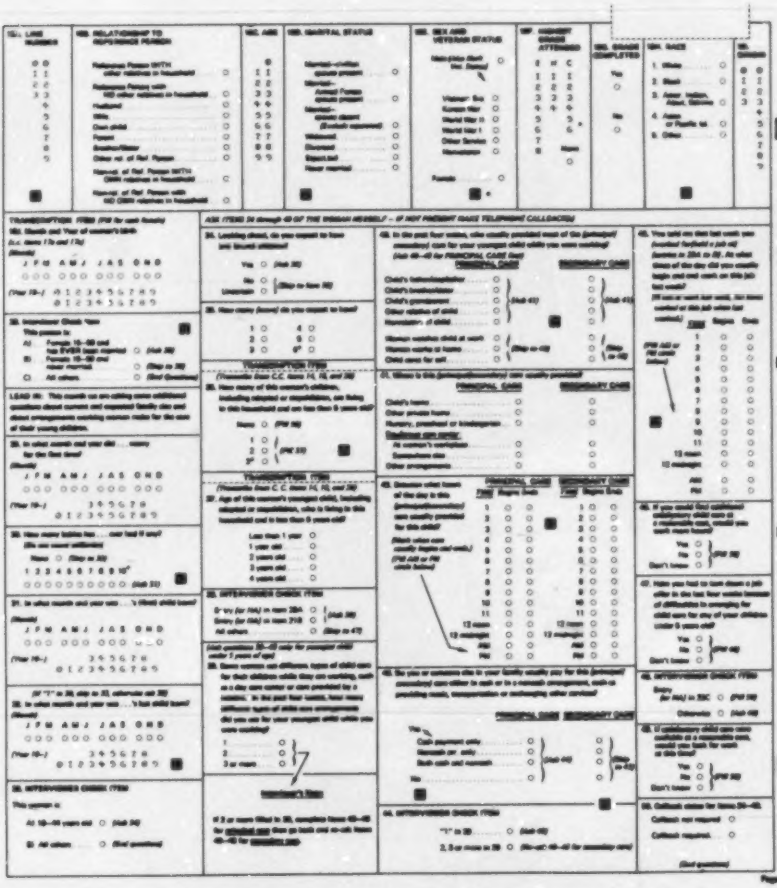
Appendix D. June 1982 Supplemental Questionnaire



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